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Buspirone Hydrochloride

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BUSPIRONE HCl

Water Solubility

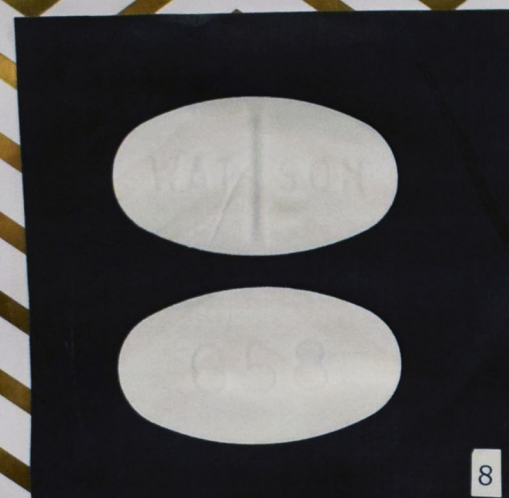
Literature Value: 21.4 mg/L

Converted Solubility:

$$\frac{(21.4 \text{ mg}) (1 \text{ g}) (1 \text{ L}) (100)}{(1 \text{ L}) (1000 \text{ mg}) (1000 \text{ mL}) (100)} = \frac{.00214 \text{ g}}{100 \text{ mL}}$$

Buspirone Hydrochloride is insoluble in water because it's solubility is less than 1 gram per 100 mL of water.

2 3 7 6



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Chemical Formula & Name

Chemical Formula: $\text{C}_{21}\text{H}_{31}\text{N}_5\text{O}_2 \bullet \text{HCl}$

Chemical names:
8-[4-[4-(2-Pyrimidinyl)-1-piperazinyl]butyl]-8-azaspiro[4.5]decane-7,9-dione with hydrochloride.

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Molar Mass

$\text{C}_{21}\text{H}_{31}\text{N}_5\text{O}_2 \bullet \text{HCl}$

$$21 \text{ mol C } \frac{(12.01 \text{ g})}{(1 \text{ mole C})} = 252.21 \text{ g}$$

$$31 \text{ mol H } \frac{(1.01 \text{ g})}{(1 \text{ mole H})} = 31.31 \text{ g}$$

$$5 \text{ mol N } \frac{(14.01 \text{ g})}{(1 \text{ mole N})} = 70.05 \text{ g}$$

$$2 \text{ mol O } \frac{(16.00 \text{ g})}{(1 \text{ mole O})} = 32.00 \text{ g}$$

$$1 \text{ mol H } \frac{(1.01 \text{ g})}{(1 \text{ mole H})} = 1.01 \text{ g}$$

$$1 \text{ mol Cl } \frac{(35.45 \text{ g})}{(1 \text{ mole Cl})} = 35.45 \text{ g}$$

$$252.21 \text{ g} + 31.31 \text{ g} + 70.05 \text{ g} + 32.00 \text{ g} + 1.01 \text{ g} + 35.45 \text{ g} = 422.03 \text{ g/1 mol } \text{C}_{21}\text{H}_{31}\text{N}_5\text{O}_2 \bullet \text{HCl}$$

Literature Value Molar Mass: 421.97 g/ 1 mol $\text{C}_{21}\text{H}_{31}\text{N}_5\text{O}_2 \bullet \text{HCl}$

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Reference List

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Names & Uses

Generic name: Buspirone Hydrochloride

Trade name: BuSpar

Classification: Anxiolytic

Uses: Buspirone Hydrochloride labeled use is to manage anxiety disorders and for short-term treatment of generalized anxiety.

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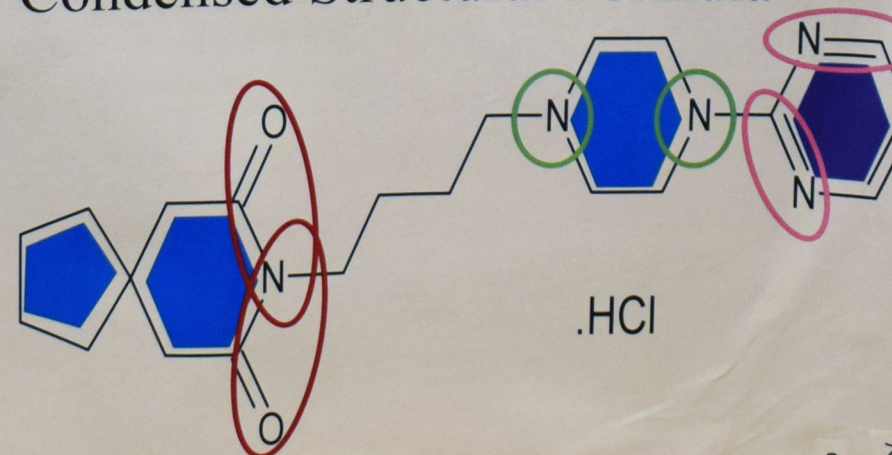
Dosage

Buspirone Hydrochloride is used to treat anxiety in adults. The drug is taken PO 7.5-15 mg/day in divided doses, may increase by 5 mg/day q2-3days as needed (max:60 mg/day). Which means, Adults would take a tablet of 7.5 to 15 milligrams per day by mouth in divided doses. Dosage may be increased 5 milligrams per day every two to three days as needed. The maximum dosage is 60 milligrams per day.

How the drug is supplied: Buspar/Buspirone/Buspirone Hydrochloride Oral Tab: 5mg, 7.5mg, 10mg, 15mg, 30mg

2 5 6 7

Condensed Structural Formula



Cyclo	Amide	Amine	Imine	Aromatic	2	7
Hydrophobic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophobic	1	4
Neutral	Neutral	Base	Base	Neutral		